

AMENDMENTS TO THE SPECIFICATION:

Please amend the specification as follows:

Page 6, replace the paragraph beginning on line 27 with the following amended paragraph:

In the azimuth measuring device according to the present invention, when 3-axis output data in the case where the orientation of the earth magnetism detection means is changed in the three-dimensional space is acquired repeatedly a predetermined number of times or more by moving or rotating the azimuth measuring device ~~using the 3-axis output data~~, if the azimuth measuring device is moved or rotated only on the plane perpendicular to any one of the three axes of the earth magnetism detection means (hereinafter referred to as "specific axis" in this paragraph), the output data of the specific axis hardly changes. For this reason, if the coordinates of reference point are estimated from the 3-axis output data group including the output data group of the specific axis, the exact coordinates of reference point may not be obtained. In this case, the exact value can be obtained by rather estimating the coordinates of reference point from the 2-axis output data group except the output data group of the specific axis.

Page 12, replace the paragraph beginning on line 22 with the following amended paragraph:

Furthermore, the azimuth measuring device according to claim 12 of the present invention is the azimuth measuring device according to claim 1, wherein the ~~data output~~ output data acquisition means comprises third difference calculation means for calculating a difference between the output data output from the earth magnetism detection means and a predetermined number of pieces of immediately preceding

output data acquired by the output data acquisition means or the output data output immediately before from the earth magnetism detection means and third difference decision means for deciding whether the difference calculated by the third difference calculation means is smaller than a predetermined value or not, and the output data acquisition means does not acquire but discards the output data output from the earth magnetism detection means when the difference calculated by the third difference calculation means is smaller than the predetermined value.

Page 17, replace the paragraphs beginning on line 17 through page 18, line 15 with the following amended paragraphs:

Figure 1 is a perspective view showing an overall structure of a portable device according to an embodiment of the present invention. Figure 2 is a block diagram showing a schematic structure of an azimuth measuring device according to an embodiment of the present invention. Figure 3 ~~[[is]]~~ illustrates a concept of an azimuth measuring method ~~for an offset value~~ according to an embodiment of the present invention. Figure 4 is a flow chart showing an azimuth measuring method ~~for an offset value~~ according to an embodiment of the present invention. Figure 5 is a perspective view showing an overall structure of a portable device according to an embodiment with two axes. Figure 6 is a block diagram showing an overall structure of an azimuth measuring device according to an embodiment with two axes;

Figure 7 illustrates a concept of an azimuth measuring method ~~for an offset value~~ according to an embodiment with two axes. Figure 8 is a flowchart showing an azimuth measuring method ~~for an offset value~~ according to an embodiment with two axes. Figure 9 is a graph showing a variation on the time axis of S_x , S_y , S_z data acquired

when the orientation of the portable device changes appropriately. Figure 10 is a graph showing a variation on the time axis of S_x , S_y , S_z data acquired when the orientation of the portable device hardly changes. Figure 11 is a graph showing a variation on the time axis of S_x , S_y , S_z data when the orientation of the portable device changes only for a short time when the S_x , S_y , S_z data is being acquired;

Page 23, replace the paragraph beginning on line 21 with the following amended paragraph:

The offset information storage section 19a stores the x component of the coordinates of this reference point as a current offset C_x of the x-axis Hall element HEx , the y component of the center coordinates of this sphere reference point as a current offset C_y of the y-axis Hall element HEy and the z component of the center coordinates of this sphere reference point as a current offset C_z of the z-axis Hall element HEz .

Page 24, replace the paragraph beginning on line 7 with the following amended paragraph:

Figure 3 illustrates the concept of the azimuth measuring method ~~for an offset value~~ according to an embodiment of the present invention.

Page 28, replace the paragraph beginning on line 5 with the following amended paragraph:

Formula (35) above are simultaneous linear equations with respect to C_x , C_y , C_z and the solutions can be calculated using well known solutions to simultaneous linear equations such as LU decomposition. Therefore, it is possible to calculate C_x , C_y , C_z when S becomes a minimum while suppressing an increase in the calculation time.

Page 30, replace the paragraph beginning on line 1 with the following amended paragraph:

Figure 4 is a flow chart showing an azimuth measuring method ~~for an offset value~~ according to an embodiment of the present invention.

Page 38, replace the paragraph beginning on line 7 with the following amended paragraph:

In this case, a block diagram showing a schematic structure of the azimuth measuring device, a figure illustrating the concept of the azimuth measuring method ~~for an offset value~~ and a flow chart of offset calibration are as shown in Figure 6 to 8.

Page 42, replace the paragraph beginning on line 24 with the following amended paragraph:

As described above, according to the azimuth measuring device according to claims 1 to 12 or the azimuth measuring method according to claims 13 to 20, it is possible to calculate offset information with respect to the output of each axis of the earth magnetism detection means by only arbitrarily changing the orientation of the portable device, simplify the offset calibration work and reduce load on the user when carrying out offset calibration.